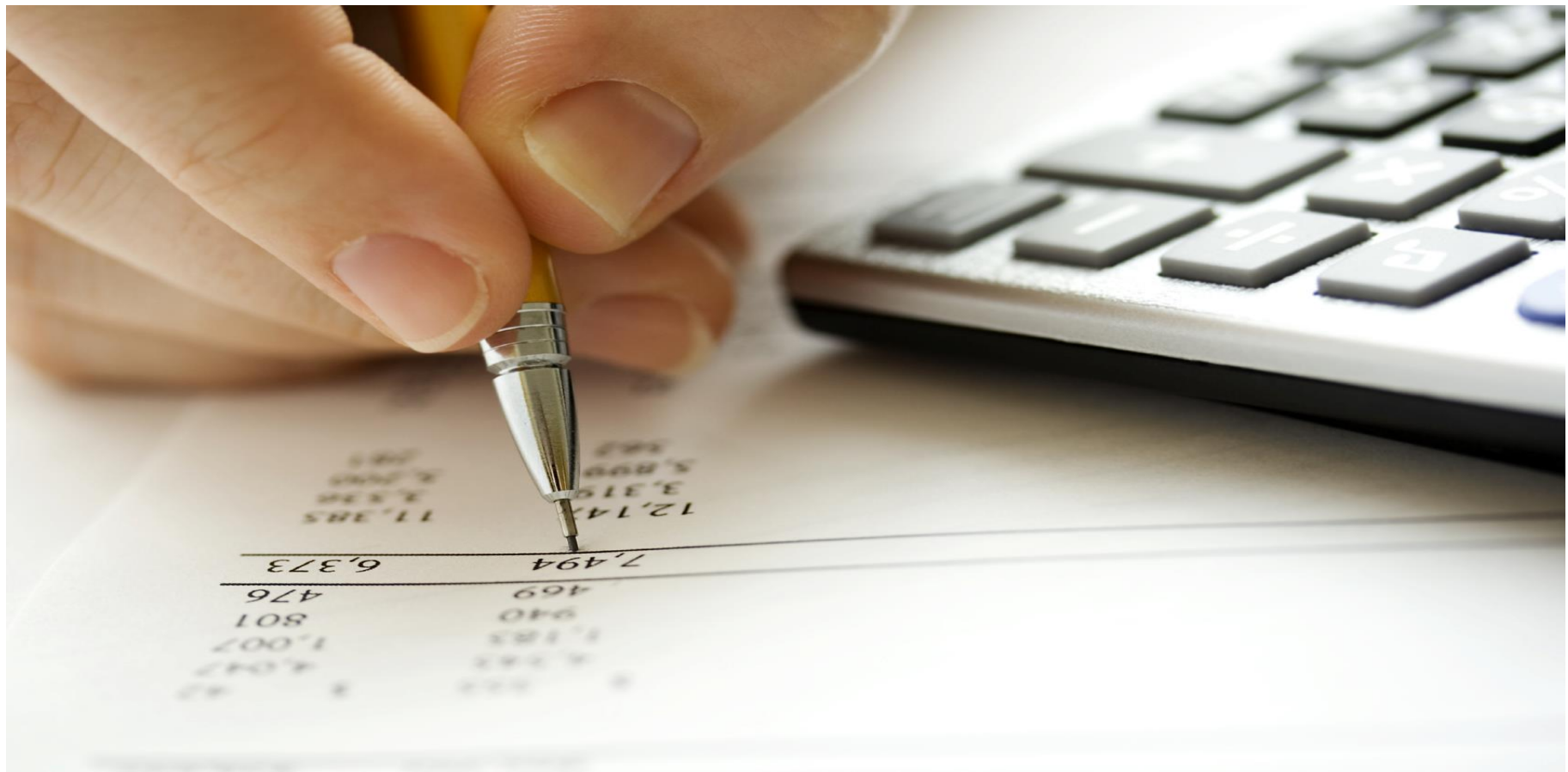


City of Rockville Experience Study

HayGroup®

Investigation of Actuarial Experience
April 1, 2011 to July 1, 2015

September 9, 2016



Agenda

- 1 Purpose of the Experience Study
- 2 Economic Assumptions
- 3 Demographic Assumptions

01

Purpose of the Experience Study

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- A periodic review of **actual vs expected** actuarial experience is essential if a retirement system is to be financed on a sound basis.
- This study is based upon **demographic** experience from April 1, 2011 through July 1, 2015 and upon historical and expected **economic** trends.
- The study reviews the experience and sets out recommended assumptions to be used in the upcoming and subsequent valuations.

02

Economic Assumptions

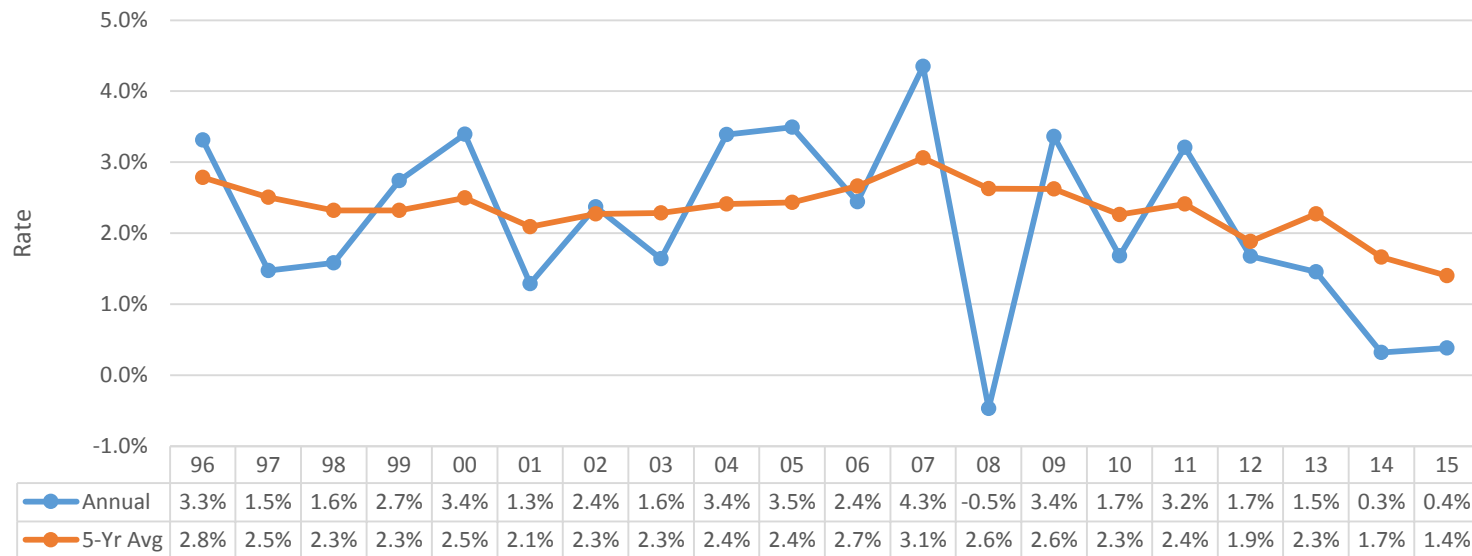
Economic Assumptions

- There are three Economic Assumptions:
 - Inflation rate
 - Salary growth assumption
 - Investment return assumption

- While the inflation rate is not used directly in the valuation, it affects the size of the expected salary increases and investment returns.

Inflation Rate

Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W)



Over the last 5 fiscal years, the City of Rockville active employee cost-of-living increases have averaged 1.80 percent. Social Security's intermediate long-term assumption of CPI-W is 2.60 percent. Long-term actuarial assumptions are often in the 2.50 to 3.00 percent range.

Salary Growth Assumption

The salary growth assumption is comprised of two components:

- Inflation/General Wage Growth
- Merit/Promotion

The current assumption for salary growth is comprised of three tables:

- Thrift Plan – 9.7% at age 20 down to 5.3% at age 60, with an ultimate of 3%
- DB Plan – 6.6% at age 20 down to 3.2% at age 60, with an ultimate of 2%
- Police Plan – 9.0% at age 20 down to 4.6% at age 60, with an ultimate of 2.95%

What we are looking at:

- Do service based rates better reflect salary increase trends
- Since recent history does not capture merit increase pool, how do we best estimate the merit component going forward

Investment Return

The current assumption is 7.5 percent comprised of 2.75 percent inflation and a 4.75 percent real return.

Historical returns through 2015 for:

- 1 year = 1.0%
- 5 years = 6.8%
- 10 years = 4.4%
- 13 years = 6.0%

The trend among governmental plans has been downward. NASRA 127 plan average is 7.62% and median is just above 7.5%.

03

Demographic Assumptions

Demographic Assumptions

Terminations are analyzed by four categories depending on their eligibility for the City of Rockville pension benefits:

- Deaths (active, nondisabled retirees, and disabled retirees)
- Disabilities
- Retirements
- Withdrawals (either vested or nonvested)

In general, the analyses developed ratios of actual-to-expected as a tool to adjust current assumptions.

Deaths

Pension plans the size of the City of Rockville Plan do not have sufficient experience to develop plan specific mortality assumptions. Therefore, it is common practice to use national tables.

Currently the Plan uses the RP-2000 Combined Healthy Table projected to 2005 using Scale AA.

We recommend updating the mortality. More recent tables like the RP-14 tables may be better. They are based on private sector data. The SOA is currently working on a review of public sector data.

Along with the release of the new mortality tables, the SOA included generational improvement factors.

Disabilities

Pension plans the size of the City of Rockville Plan do not have sufficient experience to develop plan specific disability assumptions. As with mortality, it is common practice to use national tables.

Currently the Plan uses the 1987 Commissioner's Hunters Disability Table.

Retirements

The current retirement rates vary by:

- Age
- Thrift/DB and Police

The Actual-to-Expected Ratios are:

- 1.02 for Thrift/DB
- 0.25 for Police

Withdrawal

The current retirement rates vary by:

- Service
- Thrift/DB and Police

The Actual-to-Expected Ratios are:

- 0.79 for Thrift/DB
- 0.30 for Police